

## Autodesk Inventor 2010

### Learning Autodesk Inventor 2010

#### **Description**

Learn the fundamental principles of 3D parametric part design, assembly design, and creating production-ready part and assembly drawings using Autodesk® Inventor®. Hands-on exercises representing real-world, industry-specific design scenarios are included.

<b>Pages</b>	Vol.1 – 412; Vol. 2 - 496
<b>Trial CD</b>	Yes
<b>Onscreen Exercises</b>	Yes
<b>Prerequisites</b>	No previous CAD experience is necessary. Working knowledge of the following: <ul style="list-style-type: none"><li>• Drafting, design, or mechanical engineering principles.</li><li>• Microsoft® Windows® Vista or Microsoft® Windows® XP.</li></ul>

#### **Class Information**

<b>Suggested Duration</b>	4 days
<b>Objective</b>	<p>Provide users with a thorough understanding of the principal 3D design, validation, and documentation processes necessary for developing products using Autodesk Inventor.</p> <p>After completion, users will:</p> <ul style="list-style-type: none"><li>• Capture design intent by using the proper techniques and recommended workflows for creating intelligent 3D parametric parts.</li><li>• Create, place, and constrain custom and standard components in an assembly.</li><li>• Simulate mechanisms, animate assembly designs, and check for interferences.</li><li>• Document designs using base, projected, section, detail, and isometric drawing views.</li><li>• Document assemblies using standard and exploded drawing views.</li><li>• Follow drafting standards while dimensioning and annotating drawing views with automated balloons and parts lists.</li></ul>
<b>Who Should Attend</b>	New Autodesk Inventor users.

## **In this Guide**

### **Getting Started**

- Autodesk Inventor User Interface
- View Manipulation
- Designing Parametric Parts

### **Basic Sketching Techniques**

- Creating 2D Sketches
- Geometric Constraints
- Dimensioning Sketches

### **Basic Shape Design**

- Creating Basic Sketched Features
- Intermediate Sketching
- Editing Parametric Parts
- 3D Grip Editing
- Creating Work Features
- Creating Basic Swept Shapes

### **Detailed Shape Design**

- Creating Chamfers and Fillets
- Creating Holes and Threads
- Patterning and Mirroring Features
- Creating Thin-Walled Parts

### **Assembly Design Overview**

- Designing Assemblies
- Using Project Files in Assembly Designs

### **Placing, Creating, and Constraining Components**

- Placing Components in an Assembly
- Constraining Components
- Placing Standard Components Using the Content Center
- Basic Part Design in an Assembly

### **Interacting with an Assembly**

- Identifying Parts in an Assembly
- Analysis and Motion Tools
- Presenting Your Assembly

## **Basic View Creation**

- Drawing Creation Environment
- Base and Projected Views
- Section Views
- Detail Views
- Crop Views
- Managing Views

## **Dimensions, Annotations, and Tables**

- Automated Dimensioning Techniques
- Manual Dimensioning Techniques
- Annotating Holes and Threads
- Creating Centerlines, Symbols, and Leaders
- Revision Tables and Tags

## **Annotating Assembly Drawings**

- Assembly-Centric Bill of Materials
- Creating and Customizing Parts Lists
- Creating Balloons

## **Drawing Standards and Resources**

- Setting Drawing Standards
- Drawing Resources

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**Note:** The suggested class duration is a guideline. Topics and duration may be modified by the instructor based upon the knowledge and skill level of the class participants.

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